

CLAIMS

1. A sanitary washing apparatus comprising:
a human body washing nozzle device having a discharge
5 port that discharges washing water for washing the human body,
and
a nozzle cleaning device that sterilizes at least an
outer surface of the discharge port of the human body washing
nozzle device by high-temperature cleaning.
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2. The sanitary washing apparatus according to claim
1, wherein the nozzle cleaning device cleans the human body
washing nozzle device by heated washing water.
- 15 3. The sanitary washing apparatus according to claim
2, wherein the nozzle cleaning device discharges washing
water having a flow rate of not less than 0.3 liters per
minute from the discharge port.
- 20 4. The sanitary washing apparatus according to claim
2, wherein the temperature of the heated washing water is not
less than 55°C.

5. The sanitary washing apparatus according to claim 4, wherein the temperature of the heated washing water is not more than 100°C.

5 6. The sanitary washing apparatus according to claim 1, wherein the nozzle cleaning device cleans the human body washing nozzle device by vapor.

7. The sanitary washing apparatus according to claim 10 1, wherein the nozzle cleaning device cleans the human body washing nozzle device by a mixed fluid of at least two of the vapor, the heated washing water, and unheated washing water.

8. The sanitary washing apparatus according to claim 15 1, wherein

the human body washing nozzle device comprises a plurality of nozzles that respectively spray the washing water, and

the nozzle cleaning device has a discharge port that 20 simultaneously cleans the plurality of nozzles.

9. The sanitary washing apparatus according to claim 1, comprising

a state detector that detects a state where the sanitary 25 washing apparatus is employed, and

a control device that allows the human body washing nozzle device to be cleaned by the nozzle cleaning device in a case where the state detector detects that the sanitary washing apparatus has not been employed yet.

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10. The sanitary washing apparatus according to claim 9, further comprising

a toilet seat on which the human body is to sit,
the state detector comprising a seating detector that
10 detects the presence or absence of seating of the human body
on the toilet seat.

11. The sanitary washing apparatus according to claim 9, wherein the state detector comprises an optical detector
15 that optically detects the presence or absence of the human
body on the toilet seat.

12. The sanitary washing apparatus according to claim 9, wherein the state detector comprises a load detector that
20 detects the presence or absence of the human body on the toilet
seat by a load on the toilet seat.

13. The sanitary washing apparatus according to claim 9, further comprising
25 a toilet cover,

the state detector comprising
a toilet cover opening/closing detection device that
detects the opening/closing of the toilet cover.

5 14. The sanitary washing apparatus according to claim
1, wherein

the nozzle cleaning device comprises
a heating device that heats the washing water, and
a spray device that sprays the washing water heated by
10 the heating device and/or the vapor to the human body washing
nozzle device.

15 15. The sanitary washing apparatus according to claim
14, wherein the human body washing nozzle device discharges
the washing water heated by the heating device to the human
body from the discharge port.

20 16. The sanitary washing apparatus according to claim
14, further comprising
another heating device that heats washing water,
the nozzle cleaning device discharging the washing
water heated by the other heating device to the human body
washing nozzle device from the spray device.

17. The sanitary washing apparatus according to claim 14, wherein

the nozzle cleaning device further comprises
a flow rate adjustment device that adjusts the flow rate
5 of the washing water supplied to the heating device,
the flow rate adjustment device spraying the washing
water in a gas state and/or a liquid state from the spray
device by the adjustment of the flow rate of the washing water.

10 18. The sanitary washing apparatus according to claim 1, further comprising a notification device that notifies, after a cleaning operation performed by the nozzle cleaning device is terminated, that the cleaning operation is terminated.

15 19. The sanitary washing apparatus according to claim 18, wherein

the notification device makes notification that the
cleaning operation is terminated after an elapse of a
20 predetermined time period since the cleaning operation
performed by the nozzle cleaning device was terminated.

20. The sanitary washing apparatus according to claim 18, wherein

the notification device makes notification that the cleaning operation is terminated when the temperature of the human body washing nozzle device is lowered to a predetermined temperature.

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21. The sanitary washing apparatus according to claim 18, wherein

the notification device stops the notification that the cleaning operation is terminated after an elapse of a predetermined time period since the cleaning operation performed by the nozzle cleaning device was terminated.

22. The sanitary washing apparatus according to claim 18, wherein

15 the notification device comprises a display device that visually makes notification that the cleaning operation is terminated.

23. The sanitary washing apparatus according to claim 20 18, wherein

the notification device comprises an sound output device that makes notification by sound that the cleaning operation is terminated.

24. The sanitary washing apparatus according to claim 1, further comprising a scale adhesion preventer that prevents the adhesion of a scale in the nozzle cleaning device.

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25. The sanitary washing apparatus according to claim 24, wherein

the scale adhesion preventer comprises
a scale inhibitor supplier that supplies a scale
10 inhibitor for inhibiting the adhesion of the scale to the
washing water supplied to the nozzle cleaning device.

26. The sanitary washing apparatus according to claim 25, wherein the scale inhibitor includes a crystal form
15 changing material for changing the crystal form of the scale
and/or a crystal growth inhibiting material for inhibiting
the crystal growth of the scale.

27. The sanitary washing apparatus according to claim
20 25, wherein the scale inhibitor includes a scale dissolving
agent for dissolving the scale.

28. The sanitary washing apparatus according to claim
24, wherein

the scale adhesion preventer comprises a cation exchange resin provided such that it can come into contact with the washing water supplied to the nozzle cleaning device.

5 29. The sanitary washing apparatus according to claim 24, wherein

the scale adhesion preventer comprises
a magnetism generator that applies magnetism to the washing water supplied to the nozzle cleaning device.

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30. The sanitary washing apparatus according to claim 24, wherein

the scale adhesion preventer comprises
a ultrasonic wave generator that applies ultrasonic
15 waves to the washing water supplied to the nozzle cleaning device.

31. The sanitary washing apparatus according to claim 1, wherein

20 the nozzle cleaning device further comprises
a washing instruction unit that issues an instruction to start the cleaning operation performed by the nozzle cleaning device.

Amendment under PCT Article 19

32. (Amended) The sanitary washing apparatus according to claim 31, wherein the washing instruction unit comprises a remote control device that issues an instruction to start the cleaning operation by remote control.

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33. The sanitary washing apparatus according to claim 31, further comprising

a disabling unit that disables the washing instruction unit,

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in the washing instruction unit, the instruction to start the cleaning operation performed by the nozzle cleaning device being disabled by operating the disabling unit.

34. (Amended) The sanitary washing apparatus according to claim 1, wherein the nozzle cleaning device starts the cleaning operation for each predetermined time interval.

35. The sanitary washing apparatus according to claim 1, wherein at least a part of the human body washing nozzle device is formed of a heat-resistant material.

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36. The sanitary washing apparatus according to claim 35, wherein the heat-resistant material includes stainless steel.

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37. The sanitary washing apparatus according to claim 1, wherein at least a part of a surface of the human body washing nozzle device is subjected to water repellent processing.